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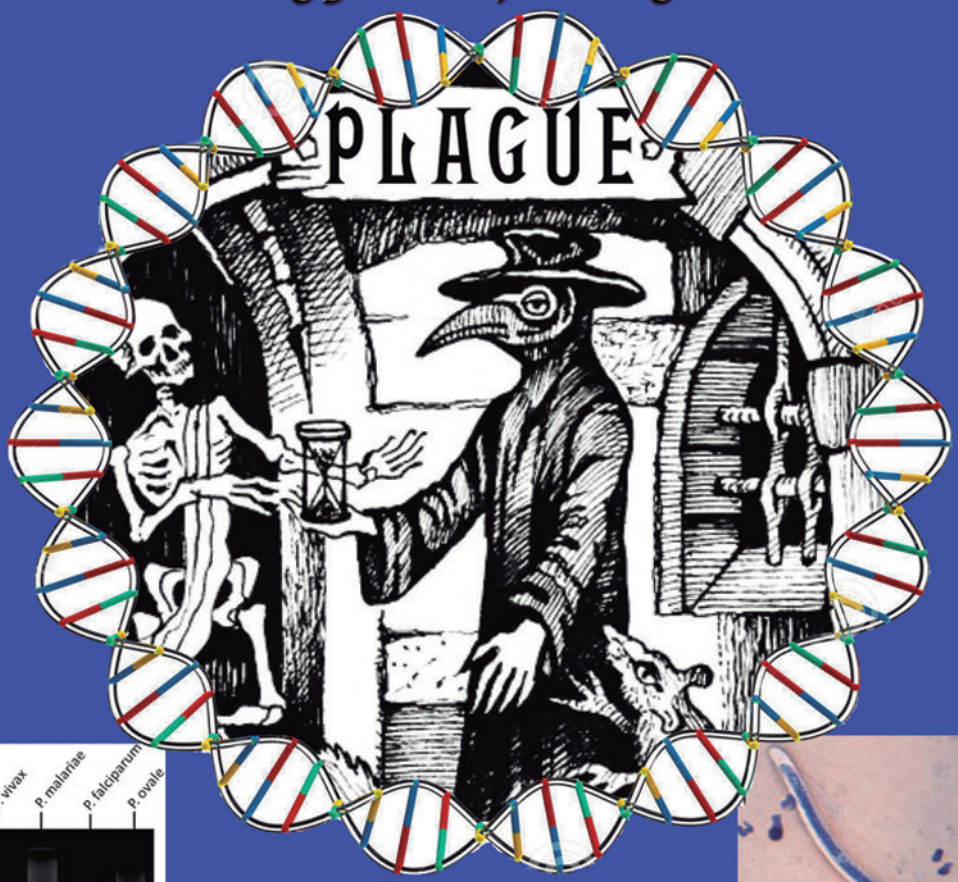
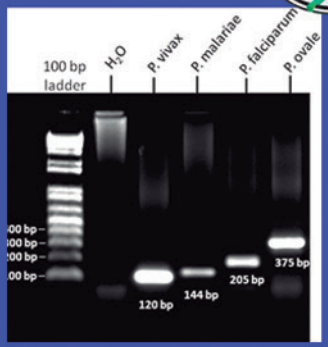
7th International SOVE Congress

New Technology Conquering Old Vectors?





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SOVE 2017

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- Book of Abstracts -

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West-Nile virus surveillance in Guadeloupe, French West Indies

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West Nile virus (WNV) emerged in the New World in New York, 1999. In the USA, the virus provokes significant morbidity and mortality in birds, horses and humans. The disease further spread southward into the Caribbean, Central and South America. WNV caused no or very limited health impact on animal and human populations in the Caribbean.
In order to detect the potential introduction of WNV in Guadeloupe, a surveillance system was implemented in 2002. Equine serological surveys evidenced viral circulation when abundant seroconversions were detected during the rainy season in 2002. Since then, annual serosurveys were implemented in seronegative equines. Important equine seroconversion rates were detected in two additional periods, the first comprised between September 2007 and August 2008, and the second between January 2011 and March 2013. Short after, sentinel chicken based surveillance was coupled to equine surveillance in areas with previous horse seroconversions. Equine and chicken seroconversions were detected between April 2013 and December 2014. Then, an entomological surveillance network was deployed early 2015 in two areas with recent horse and chicken seroconversions. At each area, the dynamics of mosquito populations was studied around sentinel chickens and nearby natural landscapes to determine the presence of potential bridge and enzootic vectors. Seasonality of mosquitoes evidenced that potential vectors of WNV are abundant during the rainy season at all landscapes. The high density of potential vectors during the rainy season does overlap with equine and poultry seroconversion periods suggesting an increased risk for transmission.